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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,817	11/21/2003	Brian E. Culliton	995 P 002	3323
28264	7590	03/22/2005	EXAMINER	
BOND, SCHOENECK & KING, PLLC ONE LINCOLN CENTER SYRACUSE, NY 13202-1355			GLENN, KIMBERLY E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/719,817

Applicant(s)

CULLITON ET AL.

Examiner

Kimberly E. Glenn

Art Unit

2817

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

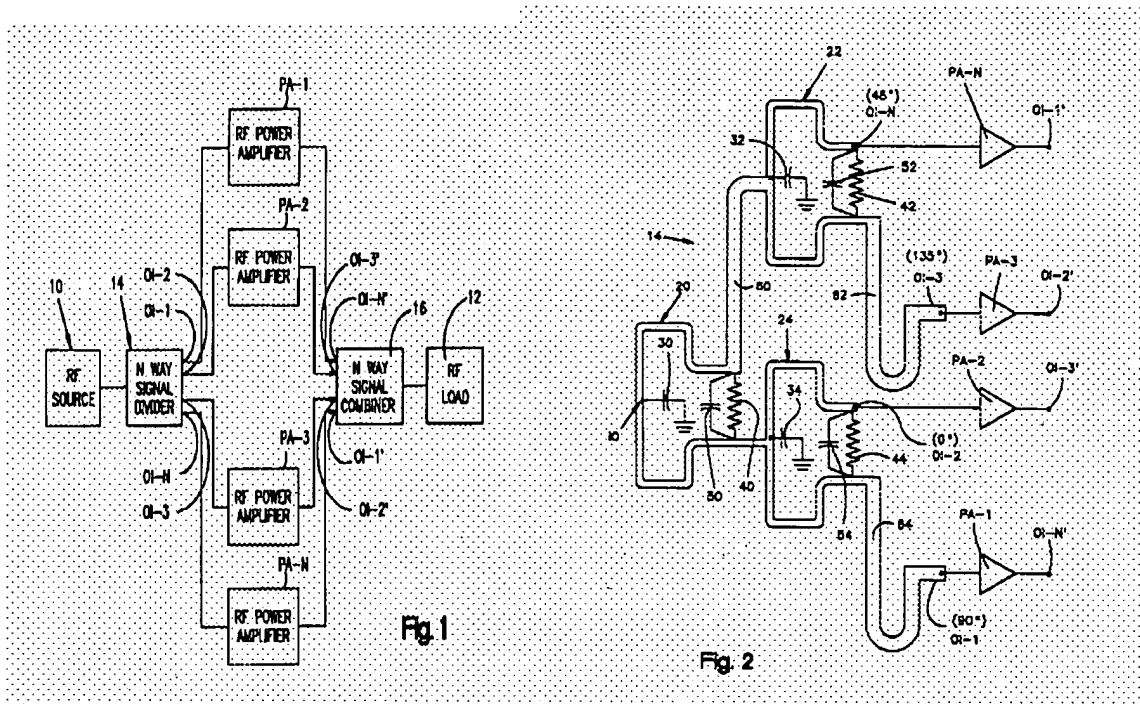
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3,5-10,12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dittmer et al US Patent 5,126,704.

Dittmer et al discloses in figures 1 and 2 a divider/ combiner, comprising of a splitter circuit 14, further comprising an input port 10; a first node; a second node; a first splitter transmission line 20 having an electrical length, said first splitter transmission line for connecting said input port to said first node; a second splitter transmission line having an electrical length, said second splitter transmission line for connecting said input port to said second node; a first amplifier input OI-N; a second amplifier input OI-3; a third amplifier input OI-2; a fourth amplifier input OI-1; a third splitter transmission line 22 having an electrical length, said third splitter transmission line for connecting said first node to said first amplifier input; a fourth splitter transmission line 62 having an electrical length, said fourth splitter transmission line for connecting said first node to said second amplifier input; a fifth splitter transmission line 24 having an electrical length, said fifth splitter transmission line for connecting said second node to said third amplifier input; a sixth splitter transmission line having an electrical length, said sixth splitter transmission line 64 for connecting said second node to said fourth amplifier

input. Dittmer et al state that the divider/combiner shown in figure 2 is used as a signal divider 14; the reverse will be used as the signal combiner 16. The first amplifier input and said first amplifier output together define a first amplifier port said second amplifier input and said second amplifier output together define a second amplifier port, said third amplifier input and said third amplifier output together define a third amplifier port, and said fourth amplifier input and said fourth amplifier output together define a fourth amplifier port, each said amplifier port for receiving an amplifier; wherein said first amplifier port said second amplifier port, said third amplifier port and said fourth amplifier port collectively accept one to four amplifiers; and wherein the phase shift of each of said combiner transmission lines and each of said splitter transmission lines is selected to produce an in-phase signal at said output port. Amplifiers are connected to all the amplifier ports. Inherently, the splitter transmission lines and the combiner transmission lines with have an impedance. Dittmer states in column 4; line 49 through column 5; line 29 and illustrates in figure 2, that the transmission lines have different

electrical lengths.



### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

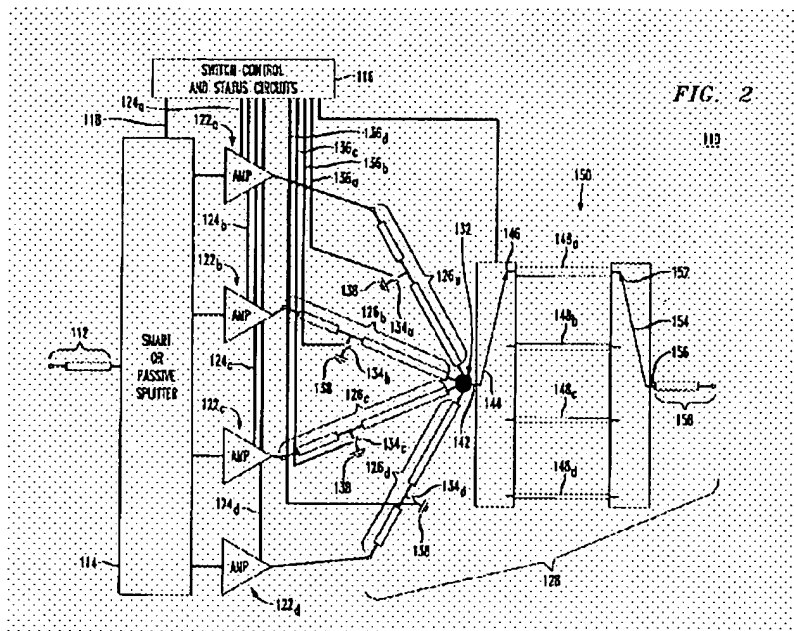
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ke US Patent 6,323,742

Ke discloses in figure 2 a combiner/ splitter circuit comprising combiner circuit, each comprising an output port; a combiner node 132; a first amplifier input; a second amplifier input; a third amplifier input; a fourth amplifier input; a first combiner

transmission line 158 having an impedance and an electrical length, said first combiner transmission line for connecting said output port to said combiner node; a second combiner transmission line 126a having an impedance and an electrical length, said second combiner transmission line for connecting said combiner node to said first amplifier input ; a third combiner transmission line 126b having an impedance and an electrical length, said third combiner transmission line for connecting said combiner node to said second amplifier input; a fourth combiner transmission line 126c having an impedance and an electrical length, said fourth combiner transmission line for connecting said output port to said third amplifier input; a fifth combiner transmission line 126d having an impedance and an electrical length, said fifth combiner transmission line for connecting said output port to said fourth amplifier input; Ke states that combiner system disclosed in figure 2 can be function as a splitter circuit. The first amplifier input and said first amplifier output together define a first amplifier port, said second amplifier input and said second amplifier output together define a second amplifier port, said third amplifier input and said third amplifier output together define a third amplifier port, and said fourth amplifier input and said fourth amplifier output together define a fourth amplifier port, each said amplifier port for receiving an amplifier; wherein said splitter/combiner circuit accepts one to four amplifiers (122a 122d); and wherein the electrical length of each of said combiner transmission lines and each of said splitter transmission lines is selected to produce an in-phase signal at said output port. Inherently, the splitter / combiner transmission lines with have an impedance and an electrical length.



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dittmer et al US Patent 5,126,704 in view of Nardoza et al US Patent 6,097,266.

See the above 35 USC rejection for a discussion of the Dittmer et al reference.

Thus, Dittmer et al is shown to teach all the limitations of the claims with the exception of the impedance present by the input port and the output port being between 35 ohms and 71 ohms.

Nardozza et al discloses in figure 4, both the input and output ports having an impedance of 50 ohms.

It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have the impedance present by the input port and the output port be 50ohms as taught by Nardozza et al. The motivation for this modification would have been to provide the advantageous benefit of compatibility with cellular and microwave systems. Column 3; lines 29-31.

***Allowable Subject Matter***

Claim 11 is allowed.

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With regards to claim 11, the prior art of record does not disclose or fairly teach the impedance transformer segment having specific impedance such 59.46 ohms.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Edwards US Patent 5,285,175, Edwards US Patent 5,313,174 and Whybrew et al US Patent 6,130,585.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E. Glenn whose telephone number is (571)-272-1761. The examiner can normally be reached on Monday-Friday 7:30 to 4:00.

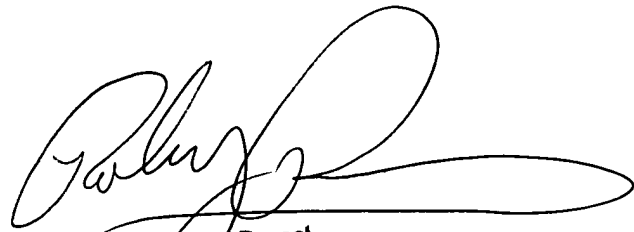


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly E Glenn  
Examiner  
Art Unit 2817

keg



Robert Pascal  
Supervisory Patent Examiner  
Technology Center 2800